

SEQUENCE LISTING

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<120> COMPOSITIONS AND METHODS OF DIAGNOSING, MONITORING,
STAGING, IMAGING AND TREATING COLON CANCER

<130> DEX-0201

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<150> 60/192,667

<151> 2000-03-28

<160> 75

<170> PatentIn Ver. 2.1

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<213> Homo sapiens

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<213> Homo sapiens

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<213> Homo sapiens

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ctttacttat ataacctact gttgtaacta atcctgggac acaatgtaag ggcttcgtcc 180
tcttgaaaca ctgctgatcc tagaggaaaa tagccatttc ctttattcac tggctctgat 240
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<213> Homo sapiens

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ctggagggtgt ctggcttatt tcacttagca tcatattttc aaggcccatc tacattgtag 180
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gtaactacta attattggtg atttaaatag aagatttatt gattaaatag taaaccatat 360
ggtatagagt ctacatatgg atagaatgtg gatgatgaag atcctttccc ataccttttt 420
ttctataatc cggagaatga gatattcaat ctggtatttg aaattcttag tcataatggt 480
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<210> 8

<211> 545

<212> DNA

<213> Homo sapiens

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<400> 8
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aagaagtatc tatttacttt ataccgattg ggggttttgc aacatgcaac caagagagtc 180
ctaactcata catcattcaa gttagtatgt ttgtattatg atcctgctta aataccatgc 240
acatgaaata aaaccttcat taactgccaa tgaagggttt atttctactgg ctattccacg 300
tgcatatgag tatagacata taaaaataaa atggtaggct tttgataagt atttttaaat 360
accaatttct accaactaat ctttgaaatg tgtcacagtt gacatgaaca gaataggata 420
tattatgtat taaaatatct ttacaaaatg gatttgctgc tcctgggtcca cttctgctca 480
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<212> DNA
<213> Homo sapiens

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caaaagggtga taaatattta cacttgatgc atttctgata gaaatgagtt tgatttttac 180
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<212> DNA
<213> Homo sapiens

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ctct 484

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<213> Homo sapiens

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gacagaaaat gagcataaat cacttgagaa ataatgagca gaatggggga atgggaagaa 180
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<213> Homo sapiens

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atattttctt aaaaaatggg ggt 143

<210> 13
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<212> DNA
<213> Homo sapiens

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tgtttgacaa tcatccatat taagatatag aatactccca tcgctccaga gtgttcctt 120
tctgttcctt tcagtcagtc attctcttac tctgcaatca ctgttggtt cggtcactat 180
aaattag 187

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tttttagagca aaacattgaa acatatattc atgatattaa ggtgggaaaa gacttcacaa 180
acagtttttt aaaaagtggg aacggcaag ggaaaaacttg taaaactgga caatatcaaa 240
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tacactctac atatataaaa tgtaaatata cacatgaata caaacatcta catattgata 360
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cccaacacaa gacacttc 438

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 <212> DNA
 <213> Homo sapiens

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 gtcatttgca ttaatctgat gatttttaaac tacacatttg gccacaata tctaattaat 180
 ttgacaagag agttatggaa ataataaaaa ttactttgaa atttcaaggg ccacttcatt 240
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 cagtatttta atttccaagt aataggtatg ctgaatgtta atttgccta catttggcat 360
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 tttgagtgtc tcattttaaaa aaaactagcc ggcataagagc cattattttt agtttttctg 540
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 <212> DNA
 <213> Homo sapiens

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 <212> DNA
 <213> Homo sapiens

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ttctatccat attatgtatt tttagggcca tttccaccat cctcccaccc caggcaatac 240
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tattaaagca gtttcagcca acatagtagt tatttatttc agctcttaga gttcttcctt 360
ccattggtaa tggccctaaa tcttttccta tctgatgaaa tttccctgaa caaaacatcg 420
atgtttctaa tttgatcacc attatatact gagttcctac caggtagtagt aggctgtatt 480
tgttaaataa ataaatgagt aaagacgt 508
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<212> DNA

<213> Homo sapiens

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ataatcatat ttgtatcaa tttgtctgca ttgcaatgac tagaacattc caataactgt 540
catgtctgtc aatgtccatg gtcattataa 570
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<212> DNA

<213> Homo sapiens

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 <213> Homo sapiens

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 <213> Homo sapiens

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 <212> DNA
 <213> Homo sapiens

<400> 23
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<210> 24
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<212> DNA

<400> 25

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<210> 27
 <211> 531
 <212> DNA
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<400> 28
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 tctgctaaaa gggacttagt cgtcttatag tttcttggtt gtaggattgg atcagcaatt 360
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 tggcatttgt tttggtaatc aataactctt tatcataatt tatatttaca gtgttgattc 480
 tgttgaacag gtatagacag taatgtttac atttacttg attaaggttaa taatgtgtaa 540
 ttgtttctat aaatttttta gattttcatt tgtggaaatt tgagttgctt tcgagttttc 600

tagtgtagtt tattgatagt atatgaaatt gctagcaaat caatgacttt aacaaaatttt 660
 tgttgtaaat cctttttttc cccttcgtct gtaggt 696

<210> 30

<211> 554

<212> DNA

<213> Homo sapiens

<400> 30

actaaataaa aattctagta aatattgaat tatattattc tttcagcaaa aaaatagtat 60
 tttattatct ctacaaaatg tagaggggag tattctaggt aactgaatgt ttcttagcct 120
 aacttcttgc ttgaagaagg ccttgaaaca aagacttgca tacagatagc ttatttttagc 180
 aagtgatatc ctaaggaaca gtagcaagag acttgggagt gttaaacaga gaagattaaa 240
 agccaattta agagtatgct gttgagctgc ttaattatgt aggcaactgc tcataaatct 300
 tattgactac tcttggggtg ccttgtagaa cgcaccttca acttgagccc ttgaaacaag 360
 gaaggcatga caatatgccc gcagactcct tttataattg gtgaagaatt ttcttagggt 420
 ttcttaacca cttgtgattt caggtttgtg atcaaaccag aatgactgag cggactcctg 480
 tttagagtct atgttctcag agaaatactg ggggagaaat ccagaggtaa gtatctcagc 540
 caaggtggag tggt 554

<210> 31

<211> 589

<212> DNA

<213> Homo sapiens

<400> 31

ccgccccgtg tgatggatat ccgcagaatt cggctttcga gcgccccccc ggccaggtct 60
 cagagccttg gactctgaga tatcaatggt catcacataa agattagaag cccatatctt 120
 ttcttttttt taaaagatat tgtttatgta ttttatatcc tgatggaaac ctgggagaca 180
 ggagaccat ataattgtccg agattgaata ttctgccagc ctgggtggat ggagttaga 240
 atcagaatta aattgaattt aaaaaagaca agggaggtta tgtttcttat agtttttagt 300
 ttatgcattt cacatgatgt gaatcttctt cctcagcatc ccactcttct gaccagaaat 360
 caggttactt tttagattct caataactct ccaaagctcc taaccaccat gaattttggg 420
 cataaacttt tctgccttct tgtagggagt atgaaaatgt tatctgtggc atccccgat 480
 ccatggggac ccaagcccca tttcattagg aatgattcac acttctcaaa ggcaaagtgc 540
 tcaaagcata taaagtcttc ttggcctaac accttatgtt tctgtgggt 589

<210> 32

<211> 675

<212> DNA

<213> Homo sapiens

<400> 32

acaagctttt tttttttttt tttttttttc ctatcctccc ggcttttttt ttgggccccg 60
 ggggggggacc ttccccacaa aggaaaaaaa agttatttaa aaaaaccggt ttccggggaa 120

```

accctgtctg gtgggtccct ctgggggtgcc cccctgttta tatgccaacc ccagaagcca 180
gcaggaaaga ggaatcccca aagccccata agagagtggg gccacaagg gaagataagg 240
aagcctctta atgaaatttc caggaagtgtg tctctgggaa gaggggtgcc tctggttaag 300
cgaaaaaacc cgggggggtg aaaaaacttg ccatgtgggc ccaaagagcc accaggggtcc 360
cactgggcgg gaaaacacgg tgggtctcc acaggggggg gttatattcc tgcccagggg 420
ccctcgaacc tcattttggc ccgcggaaga ggtaatccgg gcgattccgc acagggggtc 480
tcgcggggag gggccgcaca aaaggcggat ttcaacgcca catggggggg gccgacaata 540
ggggaccgga gttggtacct acgttggggg gtaccatggg ccaaaggtgg cccgggggga 600
aattggttcc cgccaatcc ccacatatca ccaacaaaag atgataaaaa agaaagacca 660
aaacaaaaga gacga
75

```

<210> 33

<211> 582

<212> DNA

<213> Homo sapiens

<400> 33

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acttacctcc aattttcaca gatgatcatg cgccattttg tcggatacag agagctacac 60
tgaaaacaag caaatgaaca atgaaaagaa ctcatatct gtaaaagtaa gattactttt 120
agatctggtc tagaatctaa gctactctgg ctaagctatt ctttcagaca aaaccattct 180
cagctcccaa taataccata taaatgaatt tagggagcat agtgaatatg tagattagga 240
attgtatgta ttttctccat tcataaaaac acgttttgaa tctaaaactc aaatgcttat 300
ttttaagtt aaaatataat aggaagtcgg ttttctggtt cattatagtc ccacttatcc 360
tgcaaatatg cagtttagcac tctgatcaag aattctaaaa atttattttt atcaactccc 420
tagacaaagc aaacctaggt tatcccaaca cacataatat gtgtgatcct tacctctctt 480
agaaaaaaat acaatatgca atttgagct tttcactcaa gggaaaaatg agtatgtgaa 540
caacatgaat atcataatat ttttaaaata ctcaacctaa gt
582

```

<210> 34

<211> 558

<212> DNA

<213> Homo sapiens

<400> 34

```

actacataga gtttctgcat taaatatcaa tgatcacaaa gggatatactt tttaaacacg 60
catttttcaa aggactgctt tcgctttcaa tttgaggttt attctcacct gaatatcttt 120
attctgaaac tgaacaaaac ctggagggaac cagactcctt agattaaatg tcattttggt 180
taaaaaagca acattcacta aataatcaga tctcctattt tcttggcatc agagggaata 240
aatgccaggt gtaaacctaa gccagaagca aaaagtgtta aataaaaagt tcaaatatgt 300
tgctttcata aaggcaaaat ccaaatacct ttatcttttg aaatttcaat tttcggaac 360
aatataaact gctgaagtaa ttataaacct attattcttt aatacaacaa ctagaactta 420
aaacagaatt gagaagtaat ttgaatggac tatggaatgg atactgtaaa tactatattt 480
tgaatatctg atatttcata taaaaagaaa aaaatggaaa aaatttacia acaattattc 540
caaatgtctt atttatatt
558

```

<210> 35
 <211> 567
 <212> DNA
 <213> Homo sapiens

<400> 35
 acagcaaaag cccaggetcc accacgacac aatatatgca cgcaggaaat ctgtatttgc 60
 accccctaaa tatttaaaat atttttaaaa ataattaaag aaaaaataag atggaatcaa 120
 aatcataaca aagataaaaa ttatattaag ctctatgatg ttcattaaga acaataccta 180
 aacataaaaa tgtagaattc tggaagatag gatgttaaac agtgattaga agacaaatat 240
 ttagcagaaa aaaaagctga tgtagttaca tagatatcag gcaaaagagg agataataaa 300
 ggtaactgct acatgaataa aatagaccaa aagaaacaat aaaattgatc aaagaaactt 360
 agagttaatt ctttgaaaaa aacgaataaa atggaatacc aagtttttct ttgacagaac 420
 tcaaatacaa tcttgaggga agaaaacaag tgtataatga tacagactgt ttcatatcat 480
 tttctatacat tttaactcag aaaacaatat tgcattattgc tcatggacct attaaagtatt 540
 taaaattata caaatggctg aaaggtc 567

<210> 36
 <211> 583
 <212> DNA
 <213> Homo sapiens

<400> 36
 gcgccccag ttgtggatat cccaaattcg gtttcgacgc cccccggca gtacaggcag 60
 actagagccc aagttttctc attcttactg gtcaagtgga agcagtgaca tcttttgccc 120
 aaagcagtaa aataaccttt tatttttccc ccaaacaat gctgccatat cccctaaata 180
 gagaaacatc tatgtgagcc taacacacac atagcattgg caacatcttc aaaagtctag 240
 gtgtggattt taatatgatg aagttgagtt ttacagttca cacaattcca ggtttcatag 300
 tgataagaaa tgtggatcag aattgtgcct gctgtgtgaa ggtgatggca atcaggtcag 360
 ccatccaagc aggatacact tgacagacag agctcccatg caggtccccc aaatccaagc 420
 aacatgtggc tcagagttgc caaagactgt gctttccttt cctggccctt caatgatata 480
 tctccccaat gccttctctg catattttct ctctcaaatt cacggagggt ctcattagga 540
 gagcagaaaag gcctttcttc tagcactact cacttcccaa tga 583

<210> 37
 <211> 521
 <212> DNA
 <213> Homo sapiens

<400> 37
 actatttgac ttctctcttt atgtccgtgc ctttctctata aattgaaatt tgagttcaga 60
 ggcttaactc agattaaact ttttgcaaaa aagactacat aagtagtgct gtgtgcttca 120
 ttttgcaaaa ttcccttcca caggggttat acctgagaat gatgttaagc tttgagtttt 180
 atgggtgcagt tctaattgac atttatttaa ttttagtgat gtttaagcagc ctttcatatg 240
 ctttaagagcc atttctgttt aagggtctatt aagcatatga aaggctgctt aacatcacta 300
 aaaaaaaaaa aaaaaaaaaa aaaaaagggt gtggtcaaaa ttttgttctc tcgctgtacg 360

```

gggaaaaaac aaagaaaggg ttgaccgcgc cggggggggc gcataaagcg cgaatcccag 420
cacggggggc gcggaaaaag ggggccccaa gcggataacc agcgggaggg agacagtagc 480
aaaggctgac cgtggggaaa atggtaccgg ctaaattcgc g 521

```

```

<210> 38
<211> 322
<212> DNA
<213> Homo sapiens

```

```

<400> 38
acaagctttt tttttttttt ttttttttg gcccaaaagg gggtaagggg ggtgctatgg 60
ggtaatttaa agttggaaca taaaattcta ttcttgggac aaccaagtta tcaccagggc 120
tcaattaccg tgccgcgggg ggcgcgttcg aaaagccgaa tttccagaca cagcgggggg 180
ccgttaactt agtgtggatc acgagcctcg gtccaccaag cttgtggcgt taattcatgt 240
ggttcattag cgtgattccc gttggtttga aatttgttta ctccgcttca tcaattctcc 300
accacacctt tacagacaca at 322

```

```

<210> 39
<211> 306
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> (220)

```

```

<400> 39
acatatgtgg tttatcaaca ttgtataagc cattggccta aggactaaaa gcatgttaaa 60
aagaatgggg tcccttatat taagtgggta ataattgctt gttaacaatt ttaactctag 120
aataaatttc tctctctgaa gggccctgaa tctttatgtg aatattgcct atttatcaca 180
ttgtggagcc aagtgaacat taaaaaacta caataaacan cgtttaaagg aacaaaattc 240
tttcatagcg atacagacgc atactttttt tgaaatcaag aaaccacttc atcactctct 300
cccata 306

```

```

<210> 40
<211> 487
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> unsure
<222> (160)

```

```

<400> 40
cgcccgaggt acaagtccag gcagacttga aacaggctcc attctgagaa gccaatat 60

```

```

agagagcttt tactgtttgt agacacagaa gagagatggt gtttccatt ttatgtggtt 120
aagactaata gtaatactcc ttgtcatact cataactaan tgtaatttta aaagaacccat 180
gattgagaaa gcagtcctag atattcagca atttcttagc taatttaata tttgtgtata 240
aacattttgt aaactagaaa tgtaaattt tttaactttt aaatgggatt tactcctatg 300
tttttactta tttttaaaac tataggatga ttctttgat aatttatatt taattttttc 360
ttaaatatac caccaacatc aaagtatttg ttccaactt attttatagt atgtttctaa 420
ttttcagaga gagaaatata cattctcatt ttgtcttcct ataaacaata ccatgaattt 480
gctctgt

```

<210> 41

<211> 402

<212> DNA

<213> Homo sapiens

<400> 41

```

gcaggtaact agttaacttt tgaaaataaa ctcatttgtg ttgctgagcc aaagattgta 60
ttgcatgaat atgtcacagg catcagggtga atatttcaca gagatccaaa tgcctctta 120
taatgtaata ccatgccaaa gacccagag tttttttttt tttaaatata ctttcaaact 180
gcaaagggaat tgagtttatt atattaatag taatgcatat tgttatggta tttgaagtaa 240
tagccttccc aagtgaatag ttgctgtatt atattctaatt tttgtttgtt ttgtttgttt 300
taacgggaat gtctagtaaa tcaaagacca tttgttttcc atttctctga attttcagtg 360
tcaggatatg taacatcatt cgtatctggc acacctctat gt

```

<210> 42

<211> 222

<212> DNA

<213> Homo sapiens

<400> 42

```

acaagatgaa ctttagccaa gcaagagatg actaataaaa acttagcaaa aagattttatg 60
attaatacct tcagaaagt ttataattaa acagtaaaat actctgggtg aagaacatc 120
tgtgaataaa tgagaattag ctgatattct tctgttttat gcctttgcat ataataagag 180
tgaggagcaa gtacctgccc gggcggccgc tcgaagccga at

```

<210> 43

<211> 244

<212> DNA

<213> Homo sapiens

<400> 43

```

gcaggtagat ttgagaatga acctaattta ttaatgcaat ttcattagcc caacaaaata 60
taagagtgtc taagccact atttttcttc tgggtgccttc ctggcaagca ttactgagtt 120
ataccaggta gtatttgcca ctataacgaa ctataaattg ataccaggac acaggcgaag 180
aaaaccgtgc ccaataactc ttcttttctt gagaaaaaca gtgagtctct gccatttgaa 240
gagt

```

<210> 44
 <211> 603
 <212> DNA
 <213> Homo sapiens

<400> 44
 acagaagatt acaaaatatt tgtcccttcc aatcctcagt caaatttgaa gttcaacatc 60
 atatgaagca attctgcatt ttaagcttct cagatgtttt catagctgga gcaaacttag 120
 aaatactaaa taacttttggg cagactcttc atttctttac catgccagac ccaagcgaac 180
 tactcactgt aacatcagag tagaggttat tggaggatat cacttagagg tgtccaaaat 240
 ctcccgtttt gtttaataat agtctgttaa tctcttaata atctaaacca ttgcttctca 300
 aaagaagatg ttggcatttg gtggtgacac tttttggtcg ttagaggctg tctagtgcac 360
 agcaggacat ttaacatccc tgaactccag acactaaatg ccaggggcag ccccatccat 420
 gtgatggaaa atctattccc acacatttcc aaatgccctt caagggttgg caccactact 480
 tgattaggag ccaactgtgtt ggaacctttg aaattgattt ctgtttatgg tgaagggggc 540
 tagataggac agccttaggg tttaaacca gaactacttt ctaagaggga gacttaggcg 600
 cgc 603

<210> 45
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 45
 acatatatta cgtttttcac aactgacata acttttttac ttcaagtga gtttgaaac 60
 tttgctttca tttaggtccc atgatctttt acatttctta aatatttaa tatcttcaa 120
 tatttaagtc ttaagtattt tttcataca tatggagcat tatatcaaac ttgatattt 180
 taaactgaca gatatgattt aaaaggttca tgaggctctat tatatttggt ctacgtttac 240
 catttttttt ggtttttggg ggttttattt tcctttatga aatttaaagc gtgctaata 300
 catagcttat ctgtttggaa agtttctttt aattatgctt taaggcgaga tctactgata 360
 acatattctc ttattttttc ttggtataag aagggtgtta ttttcttta attcctgaag 420
 gatagttt 428

<210> 46
 <211> 558
 <212> DNA
 <213> Homo sapiens

<400> 46
 acctcttttg gaagaagttt accaaccact actctaact gacagtaatc aaggtagtgg 60
 tgcctgaaaa agagacaagt agagcaatgg agccaactag aatctgaaa tagaccata 120
 cctaataat tttatatatt tgaaaaagac accaaagcaa tacaatgaga aaaggtcaat 180
 ctttgtaaac aaataatgtt ggaaaatcag ttatccaaat agaaaaaatg attttctacc 240
 tcaaatccat acatagaaat taattcaaac ttcttgaagg agccacagga gaacgtctcc 300


```

agaaccttca gatagtgaca gattttttga ctaggacgta gaaattagtc gggtaagaaa 360
acattgatga attgaacttt gtaagaattt taaagctctg ttcataaaaa tgcccaaatt 420
aaaggacatt ctgaaaatac ctaagtggaa ctctgaaaaa ttgtcatgaa agacaaggga 480
aacctgagaa actgtcatac aatgggaggg aaatgggagt catgacaaac aaatgtaatg 540
tagtatcctg gataggggt                                     558

```

<210> 47

<211> 453

<212> DNA

<213> Homo sapiens

<400> 47

```

tcctgaaatg cacaccccct ttcttttggg aacacttgcg atcatattgc ccgccctgga 60
ggggccgaat gcgtatttat attggtttg gattttcgag aaagaatttg ggataggact 120
taagtcacgg tgaaggaatt tcagtgtagt ggcactttga atggtgtata aagagataaa 180
tgaagttaat gggccaaaagg ggaccacccc ctctgccaca ccttgtgaag gtggcaccca 240
tttctccggc tttaatgacc tgagagcttc cccgttttga gtgtagcctg aggaatatct 300
gtggcagatg aggtcagaga tggaacagg gatgagatcc cttatggccc cgtagacccc 360
ctcacataga atttttagact ttatcctacg tgtaatcag atctttttaa gagttttaa 420
aacggggata aaaccaaaaa aaaaaaagct tgt                                     453

```

<210> 48

<211> 546

<212> DNA

<213> Homo sapiens

<400> 48

```

tattcatggc cttgatgtct cttaatgatga aagatgtaat tttttcatgt gtcttccatt 60
tgattaccgt attactgttg tcagcttttg tattccctgg tgggtgtgtg ggaaaagggt 120
ataactcttc tatcttaaga gaagagattt tttctcttat ttgaggttgt atgtttttaa 180
gctataatth taataagatc actagtgtga ttttggcatg atgacatgtt acatgcaaat 240
gtttgaatgg gtgaaaactg aacatgtttt tgccacctag gcttttcaag ttctacagaa 300
ctagaaatgc ggtatgcccc ataggcatct gttttacctg gttcccatag gctttctgag 360
ccaatattat ttgtaatatc ttacatata actcttgcat aaaaaagtct ggttgggttt 420
tatccagata aaatacatac tactttctga atattgccct aaagtatatc ttaggttatt 480
caacctcttc cataaactag tattttttat ccggagaaaa tgcggggggc ggggagccct 540
ataaac                                             546

```

<210> 49

<211> 888

<212> DNA

<213> Homo sapiens

<400> 49

```

gttttatatt gctagggttc tgggtgtgat gtattaggca attattatga aacaattggt 60

```



```

gggctcagtg tcgcgtgggt tcaaaaataa aaactagttt ggagaaaatg aattgcaagg 120
gaaaaaaatt tatttcccaa agttccgggtg tgaaaagtgg tctcccatTT tggggctttt 180
gaggaggggg ttccagtgTg gggTtggTct gatctgntaa cccggggTgTg gggggaaaag 240
gtgggtTggg gtggggagag ggaagtctcg agggTgggga aagtgggagg gaagtTtaac 300
gaggaaaagca aaacggggcc caagcgtctc aaaccgaaa tccccggggc tcggggggccc 360
accagggTtc cagggggggg ccccttTcgt tgggtgggga cacttcgTcg tggcctcctt 420
ttcaggaccc aggcgggccc ggaacctttt taggctcTgTg tggaaggTtg caccccaagg 480
tccccctttt tccccccggg gtgctcgg 508

```

<210> 52

<211> 558

<212> DNA

<213> Homo sapiens

<400> 52

```

actgtaaaca cttatacagt cttataaatg tcatggaatt ttactaaaga ggactaaatt 60
ctctagaaat tcattgtgga tgtgggccag cagcagttgc aatttggtc atagtTttta 120
tcagaccagg ttccccagaa gcagattcta agaagaggat tcttttgcta gtgatgtagt 180
aaaattgtat ttccagaaga tggctaagaa tggagatgga gggatgatgg aattcgaaga 240
aacatatgat agagaggaag caaacaaacg gtgctactgc agacaatgtc ccagaagggt 300
gatatcagcc tgctaccaca gaactctggc atatgaatca tgagcttggt tgtcataatc 360
tcataagttc agtaattggc taagggcaat tgagcagagc aacagtgtgt gctacttagc 420
aaaggaaaat aattcttctg tctttctcgg tgtctttatt tcagatgctt gtcagaacta 480
ttctgaacaa catagaacag agacaagatt tggaatcaaa taacttatca aaagatcagg 540
cacggtgtca aatagtgc 558

```

<210> 53

<211> 600

<212> DNA

<213> Homo sapiens

<400> 53

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atctgtttta gtccttgctt taaattcttt atgggcatta taccagaag tggaaattgg 60
ctgggatcat atagtaatat gttgaacatt ttgcggaaag gtcaaacttt tccgtagcag 120
ctgtgccc at tcttaccag taatgcacaa gatctcccat ttctatatat ccttgccaac 180
attatTttgt gttttaaaaa atataatagc tattagcagg tatgaagtag ttaaataTat 240
ttctttttat tctcagtgtT attctgcttt tctagaatca catctgatga taccaaatgg 300
acaagttaca ggaaaaacct tcatgacaat gaatgtgatt cggtaatctt tatttggggT 360
taatacagca gaaaaaaaag taaggctctg tgttacttcc cagataatct tgaggTcaaa 420
acagatccaa acttccataa attggagacc attttttggc agttaaaaag aaaagaagga 480
aaacaaaagc tcatctctca agcattccag ttataaattg tcccctgatg accctgctac 540
cctgctgggt atcttcataa caaaaacagt gtgactttgg cacttgTgtc acctctctgt 600

```

<210> 54

<211> 607

<212> DNA
<213> Homo sapiens

<400> 54
ggtactgaaa actcggagac gaaattccta atttcctccc tcggccctac agtctttcct 60
tagcttcttt cgggacctta agtgggtggtc tgtaaaagtg cccaaatgaa agcttggttt 120
gtcggttcac caaaaagggc cttgtcactt tgctgtgcat tttagtccgc cttgtgagtt 180
gtgtcgaaaa gtaaaggtgt tttggcatcc ttttgtttct tggcgagtgt aggaccaac 240
cggtttaggt gttaggggga tctctgtgct gcgggagctt cttgattcct ttcctgtttt 300
atTTTTtctt ttgcttggtc attggaaaag gtccagtga agggactggt gagttggaat 360
tagaagccta cttgtattaa cggcagaatt cgtgttcatt gctaaagatg cagtctcagt 420
aatgactttt ttttttaagg gatacagatg attgggtcaag gggaaaaatt aacacgccat 480
acaaTgaaga gcaagcagct tcagagtaat tttctgatgg gtgattcttc tagcctgtct 540
cttacagttc caatggcaca tgtgctccct ctttaaggct ggaaactggg atgggaagaa 600
tgatcgg 607

<210> 55
<211> 933
<212> DNA
<213> Homo sapiens

<400> 55
accagctaca ggctatccta gaatactcca caccatcttt aagttcgcac tttaaagtgg 60
aatacggaga atgtgagggg gtttaataaa aaatcatttt tttaaattgg ttatatgttg 120
aagaaatagc ccttagagaa acaactaaaa tcataaagct atttggccta gagaagacta 180
tgaaagggac ttactcaatt tcaacctcag gaagaagaag gtgggagaag atcagtttca 240
aattagatta gaaaagcttt ctaatttttc ttttaaaaaa gctatagaaa atcagatata 300
cctcactgaa aacttaaaaa atgggtttta gtggggaatt gctttatgtg tagacagaag 360
acaaaactac acctgggaga gtaaaatcaa acccaaatc tctgtgtgtc ctgtttatct 420
ggtttgtctc ctttttatct gacaaagaaa gcagggttga gaaggagag gaagaactgt 480
ccaggacttc aggagcctca cttccttgac aggactctga cagctcaagc ccatttgctc 540
actcttgctt ccaggtcta aatgtgcat tgcttggtt ctgggctatt ttgtttcagg 600
gatgttcact ttgcagataa tattgagcac agagacgcac acacacacac acacacacac 660
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<211> 74
<212> DNA
<213> Homo sapiens

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74

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<211> 460

<212> DNA

<213> Homo sapiens

<220>

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<222> (8)

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cgaaagccta taatcactgc gcccgtcat aaggggatgg ccatggctag gtttatagat 180
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<213> Artificial Sequence

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21

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<223> Description of Artificial Sequence: Synthetic

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21

<210> 60

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<212> DNA

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23

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19

<210> 62

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<210> 63

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<210> 64

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<210> 74
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ctgtgcccat ttcttaccag taa 23

<210> 75
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